



GEORGE ENGELMANN BOTANICAL NOTEBOOKS

*Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.*

1. Pitahaya dulce

2.50



which has al-



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2
P.
Carduus caput-medusae
3
Choreea
4
Venusia —
5 —

Glyndrocephalus
Echinocactus

canister
plus our
areolaris
harris &
5-7 rad.
Bacca v.
areoleolate. From
more is said
feel high &
in Tamant
produced
L. S.
has also been



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Wm M Gable No 3

Berkeley Calif 1867

Cereus Thurberi Engelm. Bot Board p. 44 t. 84 f. 15.

cylindros erectis s. ascendentes elationibus, e basi planibus
plus minus articulatis & ramosis, late costatis;
remotis articulatis, parvis; aculeis
parvis articulatis obscuris, plurimque
adaltis, singulo centrali robustior;
majore globosa truncata, sparsim
ta.

2081

From Cape San Lucas to Rosario 30° Lat.
sandy than in rocky places; 10-20
profusely branched; branches 4-6 inches
with rounded ridges and very shallow
fruit $1\frac{1}{2}$ inches in diameter, "the most
delicious fruit in Mexico" "Pitahaya dulce".
woody skeleton cylindric, perforated.

Eventually identified with Thurber's plant,
which has also been found again by Dr E Palmer.



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No. 3. C
branches 4-
Spines smaller
than the other
Flower unken-
truncated at
like those of
and rarely p-
ken the plant to
be considered
from
proper stand-



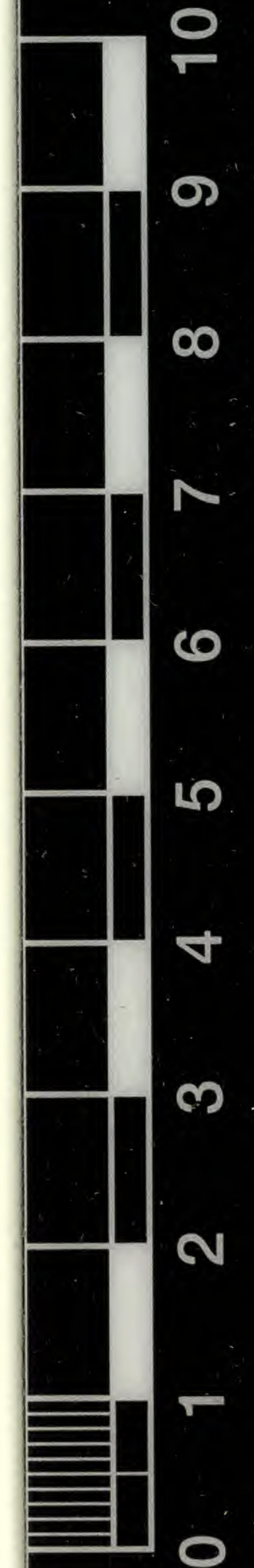
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the
N^o 3. *Cereus* (*Pitahaya dulce*) 10-20 feet high, profusely branched
367 branches 4-6 inches diameter, erect; grooves of stem very shallow.
Spines small, variable in number; usually one central one larger
than the others, always rising from a black spot on the rib
flower unknown. Fruit round $1\frac{1}{2}$ inches in diameter
truncated at the apex and covered with small scattered spines
like those of the branches. Woody skeleton thin, cylindric,
and rarely perforated. N^o 1 of sketch gives the habit. I have
seen the plant labeled in a Conservatory *Cereus Pitahaya*. The fruit
is considered the most delicious fruit in Mexico
from Cap^t Lucas to Rosario del 30°
prefers sandy plains, though (rarely) among rocks

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11765
EGO



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Echin. ingens

sem. Roselynn leg.

2082

Roselynn



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C. Thunberg

Thunberg's specimen 2083

1856 Roettler del.



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Boys
N 9, F II.

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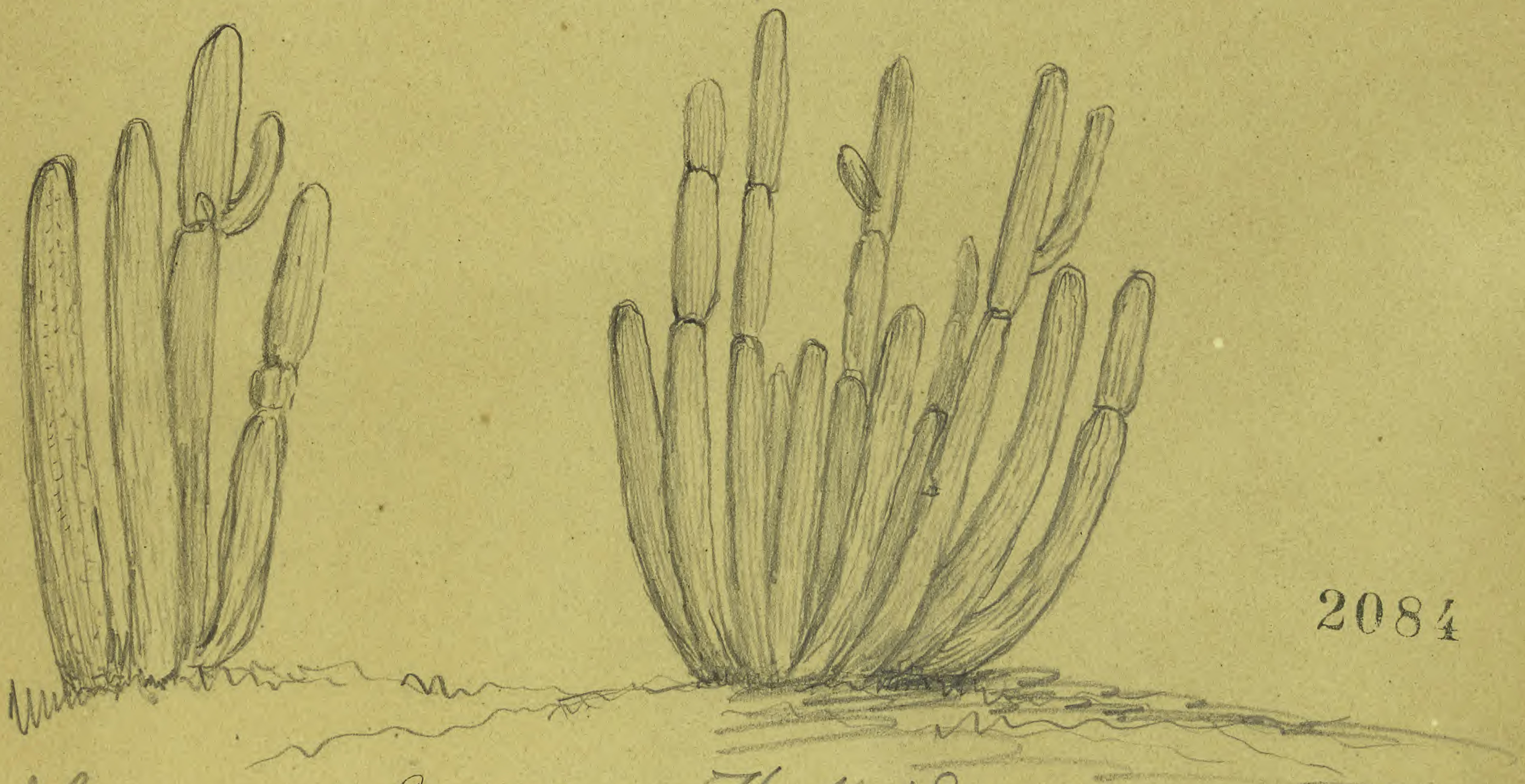


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2084

G. Thunber del.

Cereus no 2 - Thunbergi Engel



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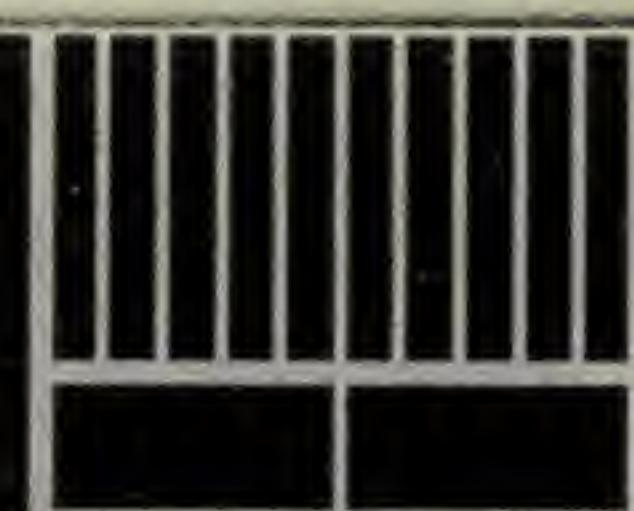
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Notes on *Cereus giganteus* of South eastern California
and some other California Cactaceae

In Emory's Report Notes of a military Reconnoisance
etc. published by order of Congress 1848 I have from
the ~~imperial~~ etc. furnished by Col Emory ventured
to describe for — the immense ~~one~~ of largest
Cactus known anywhere ever found. Since
then several travellers have seen this plant
except me and confirmed the extraordinary
assents of the first discoverer. No further
botanist ~~it was~~ also asserted that Dr. Humboldt
has had a knowledge of such a cactus in those
regions; he says in his work on New Spain: At the
foot of the California mountains nothing is seen but
land or rocks, on which grows a columnar cactus
(organos del Tunal) of extraordinary height." This
information was derived from the Catholic missionaries
who ~~were~~ the only white men who then had
penetrated the wilderness of the Gila river.
But no further incident offers. Details were obtained till
Col Emory, now at the head of the scientific division

of the U. S. Boundary Commission, had reason
early this spring (1852) to send Dr. C. C. Parry ~~to the~~ with me an
expedition down the Gila river.

Dr. Parry who two years before had been in
~~South~~ California who was conversant with the
party paid particular attention to the Cacti
of that region and ^{carefully} examined the *Cereus*
giganteus. From his very full notes, kindly
communicated by Col Emory, I have ~~estimated~~
completed the description of the plant.
Unfortunately flowers ~~if~~ it were not seen
at that season, but the account of the flowers
and fruit rests as yet on the ^{reliable} information gathered
by Dr. Parry.



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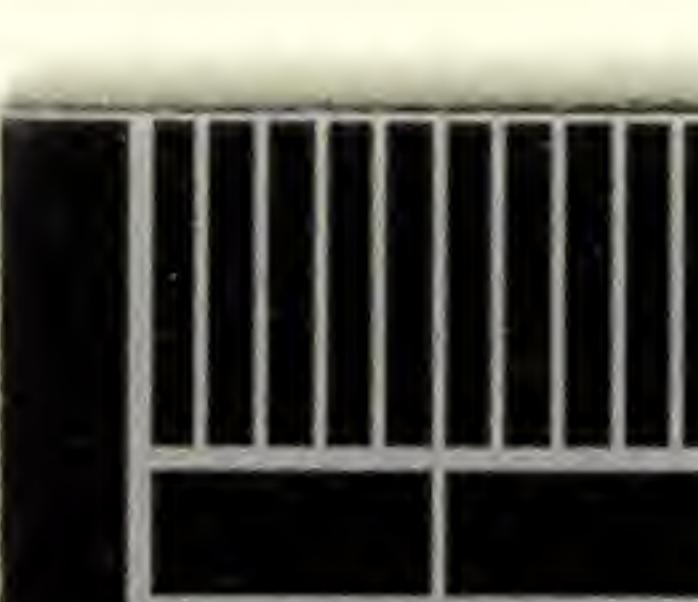
Cerat's gigante. Engl. - Dcay, Rep. Exotica etc

Mr Charles Knight has made ~~the~~ ^{thus far} no record of ~~them~~ ^{thus far} to grow.
The only Cerat's I know in California were those vaguely noticed by Humboldt ("The Organes de l'Amazone" and some Oreumenes in the "Caverns of Rocks") the Edwards variegata (drawn by Nuttall in 1834, and Cerat's californicus (partly) Mammillaria Goodrichii lately described by Schlecht. of Kew and Edwards. Relating to Mammillaria. Dr Parry has in the years 1849 - 1850 examined and described ~~several~~ 10 or 11 distinct species of Ceratocactus, all found along the south border of California; he and Dr Leconte distinctly state that further to the north other species of the genus are found, with the exception of a Oreumenes well valued I now naturally find the missions. He has redesignated Edwards variegated ~~spurts~~, and ~~and~~ ^{of} nearly ~~well~~ for perhaps a variety which I have named C. tenuis.

A short memoir of Dr Parry's California Cacti will not be in order, a full description will be given ~~elsewhere~~ in ~~it~~ elsewhere.

1. E. Mammillaria tetrancistrata, ^{W.H.} subglobosa, angles radiantes (numerous ^{is} albus ^{or} brunneus), ventriculus 4 mm. long, riles uncinatus, floribus ventriculus pauculus (flavus - umbellis), stigmaria 3 cm. base cornuta pyriforme, seminibus nigris hilo spargendo fuscus austri.

For S. Diego to the junction of the Tule with the Colorado. - Near M. Goodrich's sheep ~~station~~ ^{and which} ^{however is} part of Cerro, on N Coast of California ^{only} ^{nowhere} distinguished by the brown ^{reticulata} spine being large ^{long} by the rough suckers etc.



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depressed Berry ^{subglobose} green, coated with minute membranous scales
2d O. undulosa var. undulosa Nutt. on dry hills & ridges
near San Diego.

3. O. undulosa B. ? cylindraceus, distinguished by its
more regular shape, & larger size, longer spines. Found near
San Felipe on the slope of California Mts.

4. Cylindropuntia ^{np.} ~~cylindrica~~ cylindrica,
15 costatus; areoles red dots 40-50, scattered single or in
pairs; bases globular, spinulosa. In thick masses
on dry hills near sea shore, about the Mexican
boundary line; crest branches 65-70 miles high.

5. C. Engelmanni Parry in lit. var. ^{planted} ~~Engelmanni~~
costis 13 tuberculatis; areolae ^{imperforatae} ~~4~~ punctillatae radiales
superantes; base ^{ovali} ~~oblonga~~ ^{aristata} spinulosa, pulposa.

Much more above San Felipe, on the eastern declivity
of the Andes.

Cactus? uniformis Nutt. - too sp. is probably
an Opuntia cylindrica with " small yellow flowers "

6. Opuntia Engelmanni Palmer San Diego Dry hill ⁵⁰⁻⁶⁰
- patches, 4 to 6 feet high. Originally discovered
at Chihuahua. This species appears to extend
westwardly to the Pacific.

7. O. Tuna Nutt. cultivated for fruit -
naturally along the mesas. called "Tuna"
10-15 feet high, fruit large edible.

8. O. polifera np. var. ^{Ligula} ~~aberrante~~, namely
cylindrica tuberculata; areolae ^{foveolatae} ~~virginatae~~ ^{foveolatae} ~~virginatae~~.

San Diego on sand hills, 2-8 feet high
forming impenetrable thickets. Near O. arborea, with
but flowers smaller, being spinous, etc.

9. O. serpentina prominent, a shrub of this
clustering tuberculata; areolae 7-9 vegetative, bases
with hemispherical concretions.

Dry hill sides, San Diego

10. O. ramosissima varie eructa ligula divaricata -
ramosissima articulis granulis, cylindrica tuberculata
var. articulis substansis secundum vaginatis; bases



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1000 talus slope, stone - ~~and~~^{and} granite, gravelly soil, near the Glendor w.
desert; 2 feet high, rocks ~~in~~^{much} sand. 8
11 Quintus Parvus ^{Wapp} rock prairie, ~~stone~~^{and} granite, gravelly soil,
abundant big ^{talus} stones, ~~and~~^{and} granite, birds abundant;
Tigula longirostris deflexo; ~~mostly~~^{mostly} ~~savanna~~^{savanna} grass;
Crossa elegans, stone - ~~and~~^{and} granite.

it from "abysmalon" slow - undulate
East slope of the Aegus mts. north of
Xanthi 4-8 miles long; longest spurs reach
flat bottom; yellowish rocks
are clavate; which are found on
the ground with abort.

Mr Charles Wright and other gallants formed
with the ~~other~~ ^{British} Regt. ~~of~~ ^{the} Royal Engineers ~~had~~
year of Egypt; the chief Regt. ~~of~~ ^{the} Royal Engineers ~~had~~
of Capt. in western Texas and sent to Mexico
and the ~~other~~ ^{of the} British Regt. ~~had~~
to me for examination.

It is impossible now to give as full a list
of them as it is desirable, but most of the above
now ~~is~~ ~~is~~ ~~is~~ ~~is~~ ~~is~~ in cultivation and will be
fully described ~~hereafter~~. Most of the species
discovered by Triggs & Teller & Gregg
and among them, and a number of new species,
I will here only state, & that my doubts
I regard to the fruit of *Cereus Greggii*
express ~~in~~ my account of the plant in

Loboy's Report have been fully supported by
Mr. Wright. He says that the plant is large,
much branched has a very large root
~~rooted~~ ^{soft} ~~in~~ ^{above} stony hard soil; and the fruit
fruit is just as figured in Loboy's Report
attenuated ~~at~~ ^{above} base and tipped at base.
The seeds he sends are large black
nigose and pitted, ^{one} ^{long} ⁸
they have ^{one} ^{right} ⁸ pointed scall.

This is the same plant which has been sent by
G. Hyatt and which has been named by
Dr. S. C. Otto. The name given



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Dr Elliott Comes Fort Whipple, Arizona, June 20th 1865

Two weeks ago I was travelling for days among forests of the giant Cacti. Their northern limit is just south of Fort Whipple (Prescott), and so abruptly do they terminate that not even a straggler is to be seen about here. Fifty miles south they appear almost in forests. Between June 5 & 10 they were mostly just done flowering. The largest I saw was about 45 feet; I saw one with 13 branches, all primary ones, the largest of these twice branched, but secondary branching is very rare. Their huge ungainly forms are so grandly beautiful nevertheless.

2086



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PHARMACEUTISTS, ENGLISH & CO.

ST. LOUIS, MO.
Cor. Fourth & Walnut, under **Southern Hotel**,
Cor. Second & Walnut, under **Barnum's Hotel**,

The illustration features a central floral arrangement with a bee at the top. A vine with leaves and small flowers winds its way across the page. Along this vine, the names of the Missouri Botanical Garden's first twelve trustees are written in a flowing, cursive script. The names are: R. Br., A. Gray, C. T. Jackson, J. C. Gray, A. Nels., W. L. Ellsworth, J. C. Greenman, G. Engelmann, and George Engelmann. In the upper right corner, the text "MISSOURI B." and "GEORGE E." is printed in red, likely referring to George Engelmann's name.

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Nov 1870

Cereus giganteus ahead, rather a globe
branch collected by Dr Palmer 1870., 4 inches diam
5 inches high. 18 ribs.

Globe crowded. 6-7 cm apart, short oval or
4-5 cm apart young ones densely woolly
spines in this branch: 7-8 central ones, ^{all straight} of which
the 4 lower are the principal or proper ones,
the lowest being the largest and shortest one
and angular (but not possible, which I have
seen in no Cereus yet), ^{about} 2 in. long; the 4
(or 3-4) upper ones are smaller; or it may
be viewed as 7 outer surrounding one central one,
the upper most of the 7 weaker, the lower stouter
the lowest stouter. All these are surrounded by
about 14 weaker white radial ones ^{acute} - ^{slightly}
+ they are all very bulbous at base and dark
lighter upward.

2087

In older parts. (at the base of the branch before now)
I find the same 7 or 8 central spines - but more
terete than in the young shoot - 15-20 lateral
ones and 6-10 intermediate spines on the
upper (still known to me) part of the areola
so that the areola, originally bearing 20 or 22
spines, has now 30-38 or perhaps 40 spines.

In former species I had seen only 6 outer
and 12-14 radial spines - nothing of the
intermediate spines have exhibited

Pamp's

Fruit oval $2\frac{1}{2}$ in. long, convex umbilic,
rangle, about 50 scales with brown woolly
areolas - axils, the upper ones bearing a few
brown spines 2-3 times long - $\frac{7}{18}$ arrangement.



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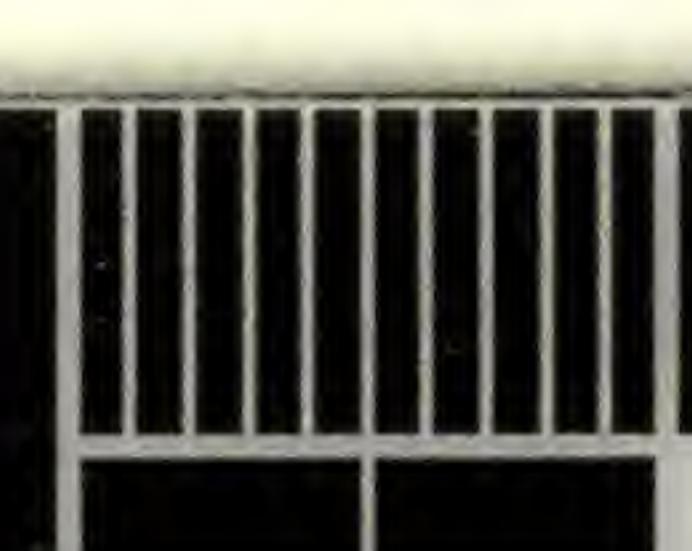
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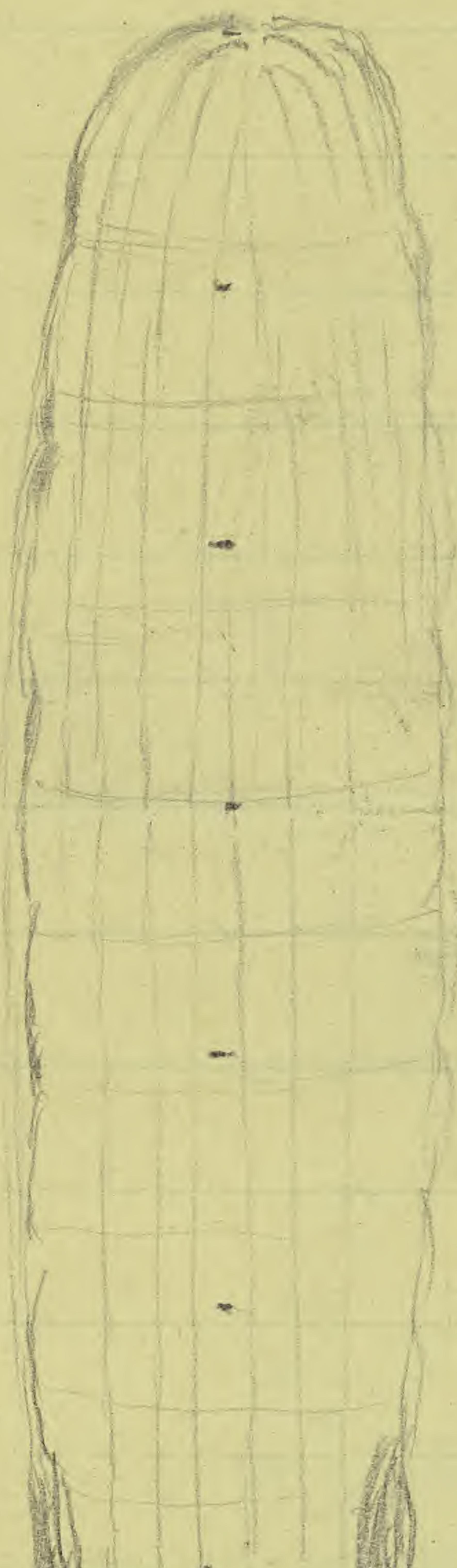
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Parry Dec 1875

22 Ribs

17 Ribs

12 Ribs



[1 foot]

2088

largest circumference
60 inch

Height 6 ft?

age nine years?
transplanted 7 years

Sketch of Ceratocactus giganteus in garden at
Old San Bernardino. showing by a dim wavy
line the annual growth. 9 years?
growing vigorously. Taking this as a
gauge. The average yearly growth is 8 inches.
Is a full sized plant of 25 ft or
more would be in said number
40 years old. 1 shall we plant?
Seed?



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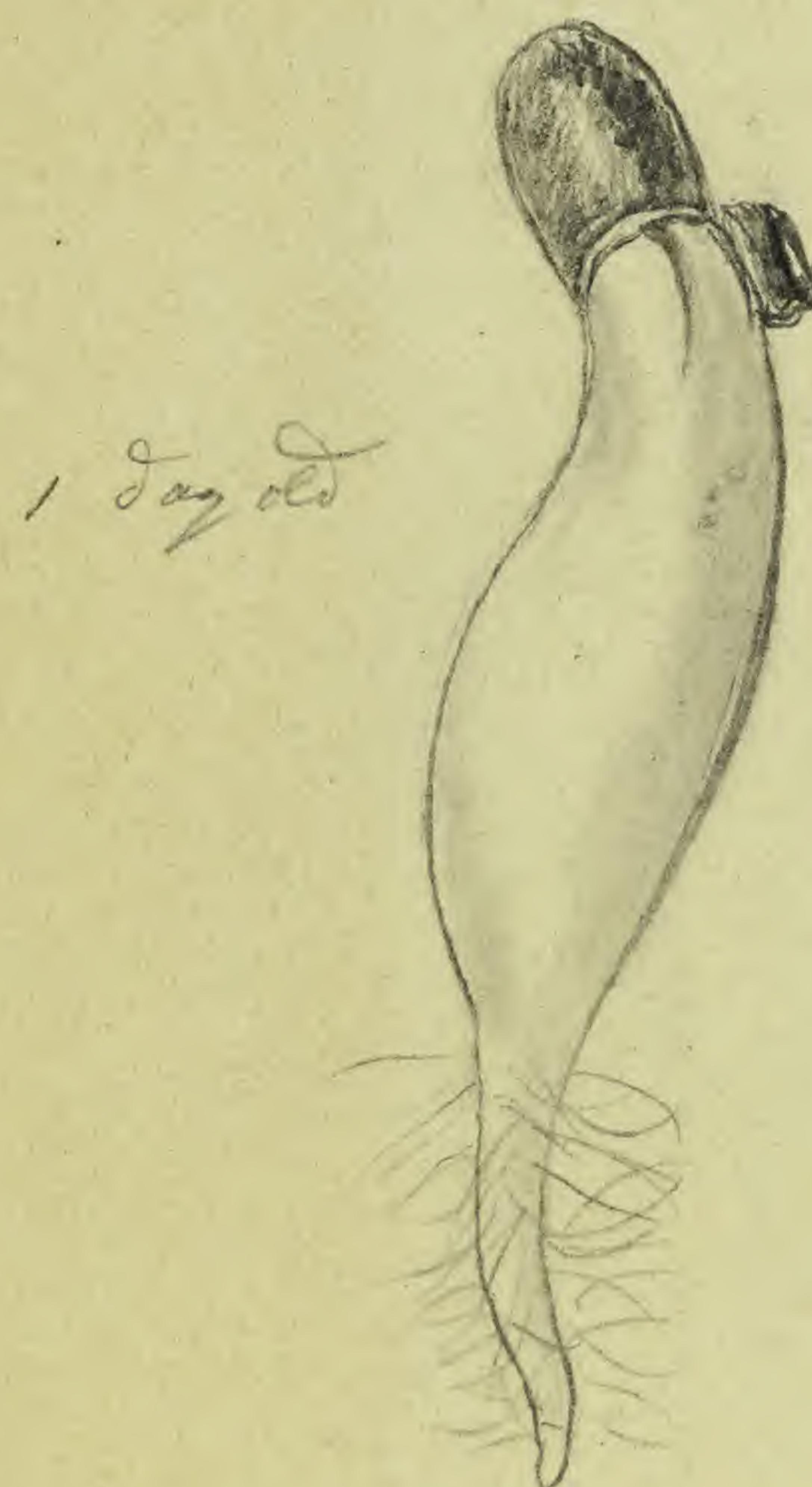
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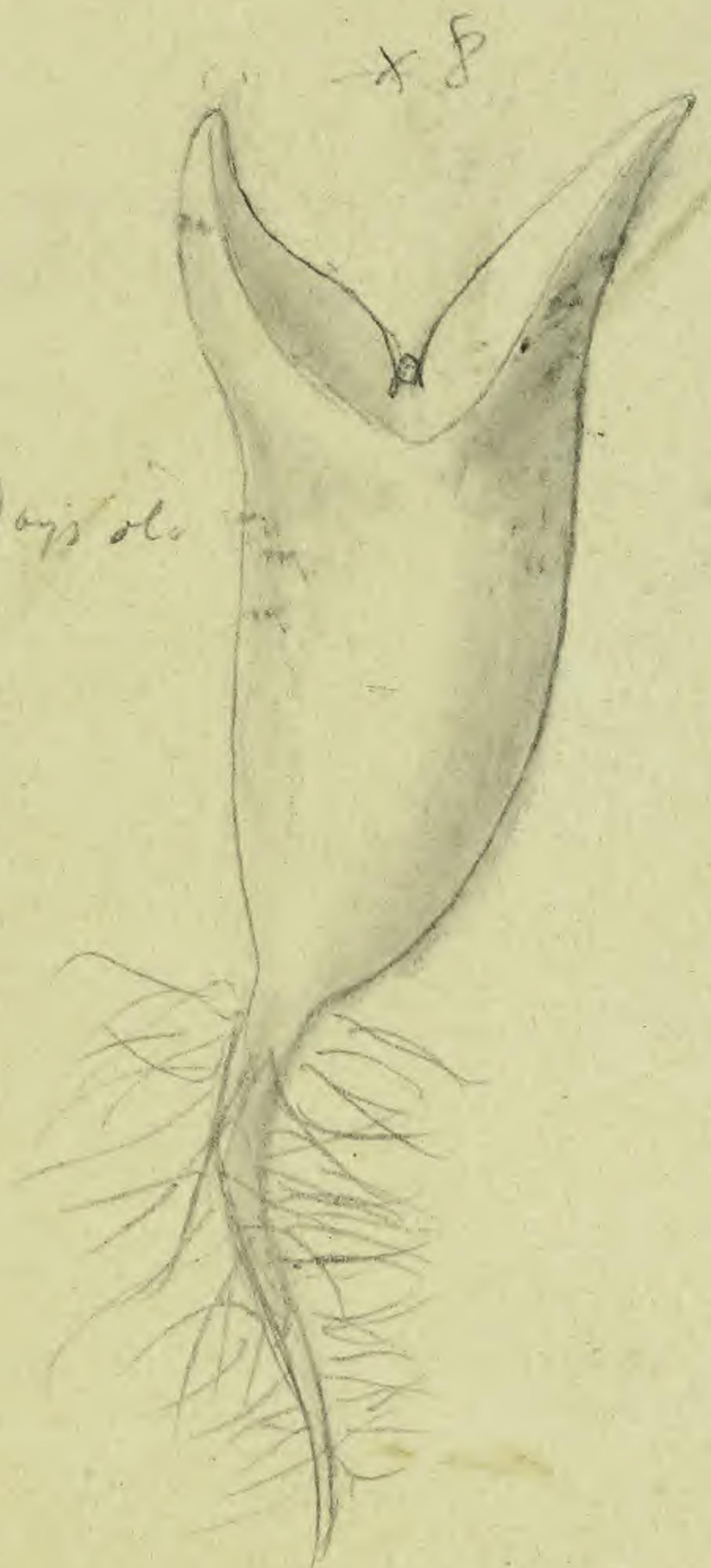
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Germination *Cercis gigantea* June 1860



whlum

3 days old



x 8



June 1860

seed shell
adhering to
one of the
cotyledons

2089



2 weeks
old



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